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Local Structure of the Multiferroic System RMn_2O_5[1] TREVOR TYSON, QING QIAN, NJIT, ALEXANDER IGNATOV, Case Western University, SOONYONG PARK, SANG-WOOK CHEONG, Rutgers University — In order to understand the origin of the coupled magnetic and ferroelectric properties observed in the system RMn_2O_5, detailed temperature dependent local structure measurements on powders and single crystals have been performed. The local structure about the rare earth (R) and the Mn sites have been examined. Comparisons with optical measurements and with various models of the temperature dependence of the pair correlations functions are made.

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